

# Chapter XI K00-K93 Digestive System

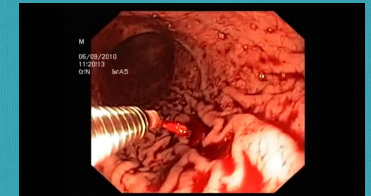
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## Upper Gut Problems

- Dyspepsia
- Functional dyspepsia
- Gastritis
- Peptic ulcer and Complications
- Gastrointestinal bleeding
- Oesophageal reflux disease
- Oesophageal varix



## Dyspepsia

'dys = bad or difficult' + 'pepsis = digestion' = indigestion



- Chronic or recurrent pain or discomfort centred in the upper abdomen when eating
- One or more the following symptoms [ROME-III 2006]
  - Postprandial fullness
  - Early satiety
  - Epigastric pain
  - Epigastric pain



- ⇒ Functional dyspepsia [Non-ulcer dyspepsia]
- ⇒ Peptic ulcer disease
- ⇒ Gastro-oesophageal reflux disease

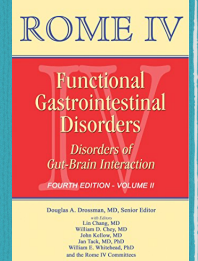
Summary Diagnosis	ICD-10
Dyspepsia	R10.1
Heartburn	R12
Indigestion	R11
Regurgitation	R11
Functional dyspepsia	K30

## Dyspepsia

Rome III Diagnostic Criteria

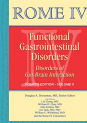
- ▶ Presence of at least one of the following
  - Bothersome postprandial fullness
  - Early satiety
  - Epigastric pain
  - Epigastric burning
 and
- ▶ No evidence of structural disease (including at upper endoscopy) that is likely to explain the symptoms.

**Note: Criteria must be fulfilled for the past 3 months, with symptom onset at least 6 months before diagnosis.**



# Functional Dyspepsia

Rome IV Diagnostic Criteria [May 2016]



Rome IV	Rome III
1. One or more of: a. Bothersome postprandial fullness b. <b>Bothersome</b> early satiation c. <b>Bothersome</b> epigastric pain d. <b>Bothersome</b> epigastric burning	1. One or more of: a. Bothersome postprandial fullness b. Early satiation c. Epigastric pain d. Epigastric burning
<b>AND</b>	
2. No evidence of structural disease (including at upper endoscopy) is likely to explain the symptoms.	
Must fulfil criteria for Postprandial distress syndrome and/or epigastric pain syndrome.	
Criteria fulfilled for the last 3 months with symptom onset at least 6 months before diagnosis.	

Bothersome = น่ารำคาญ หรือ ที่รบกวน

# Rome IV [2016] vs Rome III [2006]



## Postprandial Distress syndrome

## Epigastric Pain syndrome

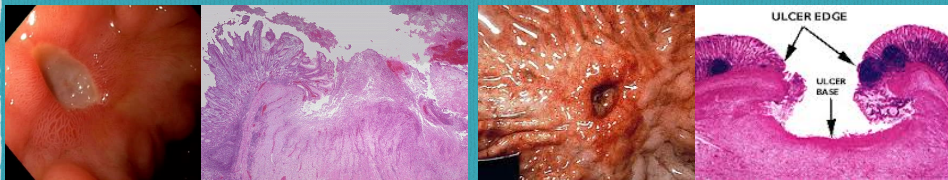
Rome IV	Rome III	Rome IV	Rome III
Must include one or both of the following <b>at least 3 days per week</b> : - Bothersome postprandial fullness (ie, severe enough to impact on usual activities) - <b>Bothersome</b> early satiation (ie, severe enough to prevent finishing a regular-size meal)	Must include one or both of the following - Bothersome postprandial fullness, occurring after ordinary sized meals, at least several times per week - Early satiation that prevents finishing a regular meal, at least several times per week	Must include <b>at least one</b> of the following symptoms <b>at least 1 day a week</b> : - <b>Bothersome</b> epigastric pain (ie, severe enough to impact on usual activities AND/OR - <b>Bothersome</b> epigastric burning (ie, severe enough to impact on usual activities)	Must include all of the following - Pain or burning localised to the epigastrium of at least moderate severity at least once per week - The pain is intermittent - Not generalised or localised to other abdominal or chest regions - Not relieved by defecation or passage of flatus
No evidence of organic, systemic, or metabolic disease that is likely to explain the symptoms on routine investigations.		No evidence of organic, systemic, or metabolic disease that is likely to explain the symptoms on routine investigations.	
Criteria fulfilled for the last 3 months with symptom onset at least 6 months before diagnosis.		Criteria fulfilled for the last 3 months with symptom onset at least 6 months before diagnosis.	

Bothersome = น่ารำคาญ หรือ ที่รบกวน

# Peptic Ulcer

An ulcer is defined as disruption of the mucosal integrity in a region that touches gastric acid and pepsin, so 'peptic ulcer' refers to an ulcer in the lower oesophagus, stomach or duodenum, in jejunum after surgical anastomosis to stomach or rarely in there ileum adjacent to Meckel's diverticulum leading to local defect or excavation due to active inflammation.

- Acute ulcer: associated with superficial erosion and minimal inflammation
- Chronic ulcer: one of long duration eroding through the muscular wall with the formation of fibrous tissue



Acute ulcer

Chronic ulcer

# Peptic Ulcer

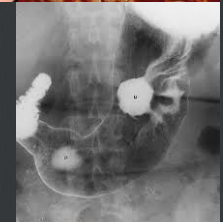
Can't diagnose by clinical manifestations in ICD-10



- Gastric ulcer
- Duodenal ulcer
- Gastrojejunal ulcer / Marginal ulcer / Stomal ulcer
- Jejunal ulcer
- Dyspepsia / Functional dyspepsia



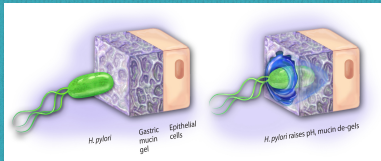
- ▶ Gastrointestinal ulcer ไม่สามารถใช้อาการและอาการแสดง ในการวินิจฉัย
- ▶ Peptic ulcer ไม่มีที่ใช้ในการสรุปเวชระเบียนในปัจจุบัน
- ▶ Dyspepsia หรือ Functional dyspepsia วินิจฉัยได้จากอาการและอาการแสดง



# Helicobacter pylori

B98.0 Helicobacter pylori [H.pylori] as the cause of diseases classified to other chapter

- Barry J Marshall & J Robin Warren at Perth, first discover in the stomachs of gastritis and gastric ulcer in 1982
- Gram-negative, small-curved, micro-aerophilic bacteria
- >80% of infected persons are asymptomatic
- Produce urease



### Diagnosis of H.pylori infection

#### Non-endoscopic tests

- : Blood antibody
- : Urea breath test
- : Stool antigen

#### Endoscopic tests

- : Rapid urease test "CLO-test"
- : Urease test
- : Histology
- : Culture



# Gastric Ulcer / Duodenal Ulcer

Type & Site & Complications = Complete Diagnosis

Summary Diagnosis	ICD-10	Summary Diagnosis	ICD-10
Gastric ulcer	K25.9	Duodenal ulcer	K26.9
Acute gastric ulcer	K25.3	Acute duodenal ulcer	K26.3
Acute gastric ulcer with bleeding	K25.0	Acute duodenal ulcer with bleeding	K26.0
Acute gastric ulcer with perforation	K25.1	Acute duodenal ulcer with perforation	K26.1
Acute gastric ulcer with bleeding and perforation	K25.2	Acute duodenal ulcer with bleeding and perforation	K26.2
Chronic gastric ulcer	K25.7	Chronic duodenal ulcer	K26.7
Chronic gastric ulcer with bleeding	K25.4*	Chronic duodenal ulcer with bleeding	K26.4*
Chronic gastric ulcer with perforation	K25.5*	Chronic duodenal ulcer with perforation	K26.5*
Chronic gastric ulcer with bleeding and perforation	K25.6*	Chronic duodenal ulcer with bleeding and perforation	K26.6*

\* included Unspecified Gastric Ulcer

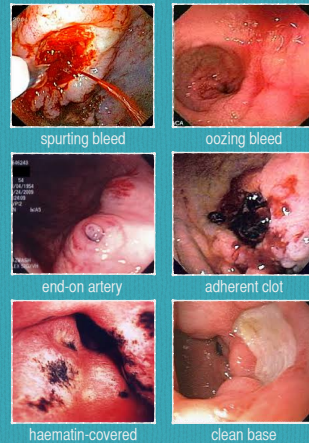
\* included Unspecified Duodenal Ulcer

# Bleeding Peptic Ulcer

Forrest classification

Forrest I & Forrest II are frank bleeding  
Forrest III depends on symptom

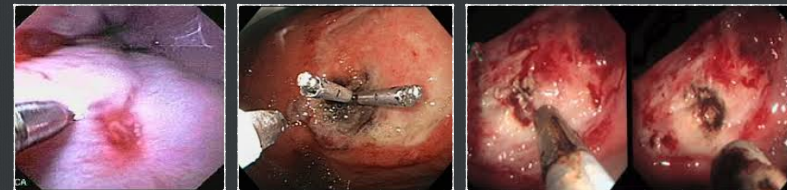
Clinical Diagnosis	Endoscopic Findings
<b>Acute bleeding</b>	
Forrest Ia	Arterial spurting bleeding
Forrest Ib	Oozing bleeding
<b>Recent bleeding</b>	
Forrest IIa	Ulcer with non-bleeding visible vessel
Forrest IIb	Ulcer with adherent clot on surface
Forrest IIc	Ulcer with hematin-covered lesion
<b>Lesions without active bleeding</b>	
Forrest III	Ulcer with clean base



# Bleeding Peptic Ulcer

Endoscopic treatment, all are 44.43 in ICD-9-CM

- Endoscopic injection therapy: saline, adrenaline
- Endoscopic clipping
- Endoscopic coagulation: heater probe, gold probe, argon plasma coagulation



44.43 Endoscopic control gastric and duodenal bleeding

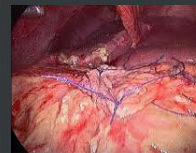
## Peptic Ulcer Perforation

Type & Site & Complications = Complete Diagnosis = Correct Procedure



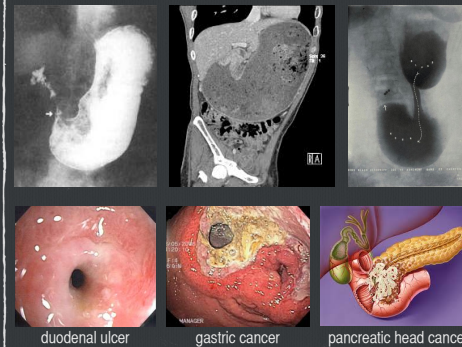
- 44.41 Simple closure of gastric ulcer perforation
- 44.42 Simple closure of duodenal ulcer perforation

ไม่ต้องให้รหัสหัตถการ Omental graft, Peritoneal toilet



## Gastric Outlet Obstruction

Clinical diagnosis



Summary Diagnosis	ICD-10
Gastric outlet obstruction	K31.1
Pyloric obstruction	K31.1
Duodenal obstruction	K31.5

- K31.1 Adult hypertrophic pyloric stenosis**  
Pyloric stenosis NOS  
*Excludes:* congenital of infantile pyloric stenosis ([Q40.0](#))
- K31.2 Hourglass stricture and stenosis of stomach**  
*Excludes:* congenital hourglass stomach ([Q40.2](#))  
hourglass contracture of stomach ([K31.8](#))
- K31.5 Obstruction of duodenum**  
Constriction of duodenum  
Stenosis of duodenum  
Stricture of duodenum  
*Excludes:* congenital stenosis of duodenum ([Q41.0](#))

## Gastrointestinal Bleeding

Symptoms & Signs of bleeding in GI-tract, not laboratory test



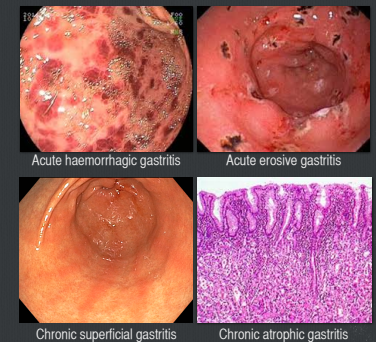
- **Haematemesis**  
อาเจียนเป็นเลือดแดงสด หรือเลือดสีดำเก่าๆ [coffe-ground]
- **Haematochezia**  
ถ่ายเป็นเลือดสีแดงสด
- **Melaena**  
อุจจาระสีดำเป็นมัน เหนียว และมีกลิ่นเหม็น  
[เลือดออก 60 มิลลิลิตร]
- **Stool occult blood [R19.5]**
- **Rectal bleeding**

Summary Diagnosis	ICD-10	Neonate
Haematemesis	K92.0	P54.0
Haematochezia	K92.1	P54.1
Melaena	K92.1	P54.1
Stool occult blood	R19.5	R19.5
Upper gastrointestinal bleeding	K92.2	P54.3
Coffee ground [NG lavage]	K92.2	P54.3
Coffee ground emesis	K92.0	P54.0
Lower gastrointestinal bleeding	K92.2	P54.3
Gastrointestinal bleeding	K92.2	P54.3
Rectal bleeding	K62.5	P54.2

## Gastritis

Must be confirmed by investigations

- **Acute gastritis**
  - Acute infectious gastritis: including *H.pylori*
  - Acute erosive gastritis: NSAID, alcohol, chemical ingestion
  - Acute haemorrhagic gastritis: ischaemia
- **Chronic gastritis**
  - Chronic atrophic gastritis: type A, type B
  - Chemical: bile reflux, NSAID
  - Granulomatous gastritis: Crohn's disease, sarcoidosis, vasculitides
  - Allergic gastritis: Eosinophilic gastritis
  - Specific infection: HIV, TB, syphilis, cytomegalovirus, histoplasmosis



## Gastritis

'K29.6 & K29.7' DCL=0 in DRGs 6.2.1



Summary Diagnosis	ICD-10	Summary Diagnosis	ICD-10
Acute erosive gastritis	K29.0	Chronic gastritis	K29.5
Acute hemorrhagic gastritis	K29.0	Chronic atrophic gastritis	K29.4
Alcoholic gastritis	K29.2	Chronic superficial gastritis	K29.3
Allergic gastritis	K29.6	Intestinal metaplasia	K29.5
Giant hypertrophic gastritis	K29.6	Curling ulcer	K27.3
Menetrier's disease	K29.6	Cushing ulcer	K27.3
Granulomatous gastritis	K29.6	Viral gastritis	A08.4
Eosinophilic gastritis	K52.8	Tuberculous gastritis	A18.8 + K93.8
Lymphocytic gastritis	K29.6	Helicobacter pylori gastritis	K29.- + B96.8
Acute gastritis	K29.1		
Gastritis	K29.7		

**Mild gastritis = Severe gastritis = Gastritis**

## Acute Viral Gastritis

Stomach flu [Norovirus]



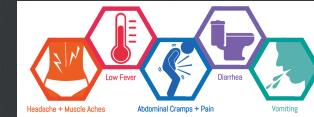
- เป็นการติดเชื้อไวรัสของทางเดินอาหาร มักพบในเด็ก  
**Rotavirus, Norovirus [Norwalk], Adenovirus, Astrovirus**

เกณฑ์การวินิจฉัย สปสช. 2562

- ไม่จำเป็นต้องส่องกล้องทางเดินอาหาร
- มีอาการที่แสดงถึงการติดเชื้อไวรัส เช่น ไข้ ต่อมทอนซิลโต และตรวจเลือดพบปริมาณเม็ดเลือดขาวต่ำกว่าปกติ ร่วมกับ มีภาวะ lymphocytosis

Summary Diagnosis	ICD-10
Adenoviral gastritis	A08.2
Coxsackieviral gastritis	A08.3
Enteroviral gastritis	A08.3
Influenzal gastritis	J10.8
Rotaviral gastritis	A08.0
Noroviral gastritis	A08.1
Specific viral enteritis	A08.3
Viral gastritis	A08.4

- กรณีต้องการระบุเชื้อไวรัส จะต้องมีผลตรวจยืนยันการติดเชื้อไวรัส เช่น immunoassay, polymerase chain reaction



## Bleeding Oesophageal Varices

Aetiology is first priority



เกณฑ์การวินิจฉัย สปสช. 2562

- มีประวัติอาเจียนเป็นเลือดหรือถ่ายดำ
- มีผลการส่องกล้องหลอดอาหาร [ข้อใดข้อหนึ่ง]
  - พบ bleeding oesophageal varices
  - พบ non-bleeding oesophageal varices ร่วมกับการรักษาที่เหมาะสม [SB-tube, somatostatin, vasopressin]
  - เลือดออกซ้ำ ต้องมีผลส่องกล้องพบ oesophageal varices ร่วมกับการรักษาที่เหมาะสม [SB-tube, somatostatin, vasopressin]

185.0	Oesophageal varices with bleeding
185.9	Oesophageal varices without bleeding Oesophageal varices NOS
198.2*	Oesophageal varices without bleeding in disease classified elsewhere Oesophageal varices in: · liver disease ( <a href="#">K70-K71†</a> , <a href="#">K74-†</a> ) · schistosomiasis ( <a href="#">B65-†</a> )
198.3*	Oesophageal varices with bleeding in disease classified elsewhere Oesophageal varices in: · liver disease ( <a href="#">K70-K71†</a> , <a href="#">K74-†</a> ) · schistosomiasis ( <a href="#">B65-†</a> )

**บันทึกโรคที่เป็นสาเหตุของภาวะนี้ทุกครั้ง**

## Oesophageal Varices

Aetiology of condition must be Principal diagnosis



Summary Diagnosis	ICD-10
Bleeding oesophageal varices	I85.0
Bleeding oesophageal varices due to cirrhosis	K74.6 + I98.3
Bleeding oesophageal varices due to alcoholic cirrhosis	K70.3 + I98.3
Bleeding oesophageal varices due to hepatitis cirrhosis	B15-B19 + I98.3
Oesophageal varices	I85.9
Oesophageal varices due to cirrhosis	K74.6 + I98.2
Oesophageal varices due to alcoholic cirrhosis	K70.3 + I98.2
Oesophageal varices due to hepatitis cirrhosis	B15-B19 + I98.2

